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Pruning Tomato Plants

Cooperative Extension, South Dakota State University

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Pruning Tomato Plants

Pruning Tomato Plants

"Should I prune and stake my tomato plants?" is asked many times each growing season. One can determine the answer much better if advantages and disadvantages of this practice are considered.

ADVANTAGES OF PRUNING TOMATOES

1. Increase yield of early ripened fruit
2. Greater uniformity of the crop
3. Increased percentage of high quality fruit
4. Larger fruit size
5. No ground rot during wet weather
6. Spraying can be done more effectively
7. Fruit can be harvested easier

DISADVANTAGES OF PRUNING TOMATOES

1. Higher cost of production
2. Considerably more labor needed to regularly prune and stake tomatoes
3. Reduction of total yield per plant

There is little or no difference in the total yield per acre of staked tomatoes as compared to unstaked tomatoes, because more plants per acre are planted when tomatoes are staked. The distance between rows for staked tomatoes should be wide enough for cultural practices—30 to 48 inches. Space plants 18 to 36 inches apart within the rows, depending upon the variety and method of pruning used. For home use, maximum spacing should be used to encourage production over a long period, but a commercial grower can use a closer spacing for early production.

Unstaked tomatoes generally give satisfactory results when a plant spacing of 6 x 3 feet is used. It has been found that if rows are spaced closer than 6 feet, it is difficult to perform satisfactory cultural operations. And if the plants are spaced closer than 3 feet within the rows, yield is generally not increased.

METHODS OF PRUNING TOMATOES

Tomatoes are usually pruned to a single or double stem system.

Single Stem System

The single stem system is a common method of pruning. Generally all shoots or "suckers" are removed when they are 2 to 4 inches long. A "sucker" is a side branch that grows where a leaf attaches to the main stem.

To obtain maximum size, quality, and yields the method of pruning shown in figure 1 can be used. This method will increase the foliage area up to 45%.

By Paul Prashar, assistant professor of horticulture

which can increase yields by 10 to 25% due to larger fruit size.

Note that in this method all the suckers are removed except the sucker just below each fruit cluster. This sucker is pinched back to two leaves as shown in figure 1. The pinched back sucker with its two leaves helps to protect the fruit from sunscald and cracking.

Double Stem System

The double stem system is similar to the single stem system, except that the sucker just below the first flower cluster is permitted to grow to form the second stem (see figure 2). Both stems are tied to the same stake. Plants pruned to the double stem system will be larger and will need more space than plants pruned to the single stem system.

In both the double stem and the single stem systems of pruning, tomatoes are usually pruned once every week. A wood or steel stake or a wire trellis can be used for support.

STAKING THE PLANTS

Wood stakes 1 x 1 inch or $\frac{3}{8}$ inch steel stakes which are about 6 feet tall are most commonly used. Drive the stakes 9 to 12 inches into the ground. Place the stakes 4 inches away from the plant on the opposite side from the cluster, preferably after the first bud cluster is formed. All clusters will be on the same side of the stem.

Jute tomato twine or any soft cord or twine is suitable for tying. Tie the twine securely to the stake and tie under a leaf stem (not under a fruit cluster). Allow 1 to 2 inches play between the stake and the vine to allow for stem growth. Too much play between the stake and the vine is not advisable due to

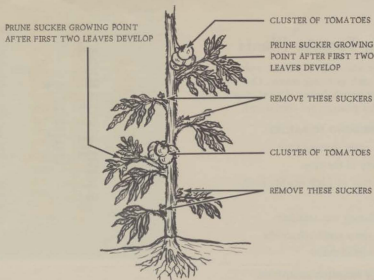


Figure 1. Single stem system of pruning.

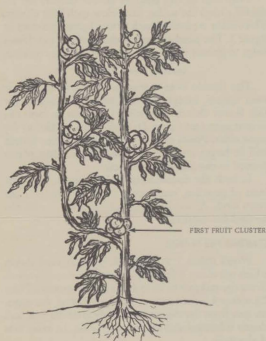


Figure 2. Double stem system of pruning. Note the sucker just below the first cluster has been allowed to grow and form the second stem.

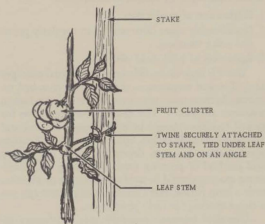


Figure 3. Method of tying tomato plant.

high wind during the summer in our area. The twine should be on an angle so that the plant has a good support (see figure 3).

AVOID CONTACT WITH TOBACCO

It is important that smoking and chewing tobacco not be allowed in the field while pruning is done because this can cause tobacco mosaic. If the workers use tobacco, they should take a break and smoke or chew it outside the field, making sure they wash their hands thoroughly with soapy water before they return to the field. When pruning is in operation, workers should wash their hands with soapy water after pruning each row or a few plants.